

## **Glyphosate in Human Urine Sample Filtration**

### **1. Intended Use**

For the detection of Glyphosate in human urine.

### **2. Range of Detection**

The range of detection is 0.6 ppb to 32 ppb in matrix. If samples exceed calibration, are known to contain higher analyte levels, or a higher detection range is necessary, samples should be diluted further prior to analysis.

### **3. Materials Required**

Vortex mixer

Timer

Microcentrifuge capable of rotating at 8,000 x g

Microcentrifuge tubes

Micropipettes with disposable plastic tips

4 mL glass vials with Teflon-lined screw cap

Test tube rack

Millipore Amicon Ultra 0.5mL 10k centrifugal filter units

Ethyl acetate

ABRAXIS® Glyphosate Sample Diluent (PN 500082)

ABRAXIS® Glyphosate Plate ELISA Kit (PN 500205)

### **4. Notes and Precautions**

This procedure is intended for human urine samples. Other matrices should be thoroughly validated before use with this procedure.

- Before dispensing any volume of liquid, condition each pipette tip by drawing the liquid in and out of the tip 3 times before the final dispense. This will ensure that an accurate volume is transferred.
- Analysis should be performed with the ABRAXIS® Glyphosate Plate ELISA Kit as soon as possible after extraction.

### **5. Filtration Procedure**

- 5.1 Place a filter from the Millipore Amicon Ultra kit into an appropriately labeled 2 mL microcentrifuge tubes and pipette 500 µL of urine sample into the filter.
- 5.2 Centrifuge the filter/tube apparatus at 8,000 x g for 15 minutes.
- 5.3 Transfer 300 µL of the filtrate into a new, appropriately labeled microcentrifuge tube.
- 5.4 Add 200 µL of ethyl acetate into this tube and vortex for 30 seconds.
- 5.5 Centrifuge the sample at 8,000 x g for 3 minutes.
- 5.6 Add 350 µL of ABRAXIS® Glyphosate Sample Diluent to an appropriately labeled 4 mL glass vial and transfer 50 µL of the bottom aqueous layer (from Step 5.5). Cap and vortex.
- 5.7 This will then be analyzed as sample, see *Derivatization of Standards, Control and Samples* in the Test Preparation section of the ABRAXIS® Glyphosate Plate ELISA Kit user's guide.

### **6. Evaluation of Results**

The ELISA results must be multiplied by a factor of 8 to account for the necessary dilution. Samples showing a concentration lower than Standard 1 (0.075 ppb) should be reported as < 0.6 ppb of Glyphosate. Samples showing a higher concentration than Standard 5 (4.0 ppb) can be reported as > 32 ppb or diluted further and re-analyzed to obtain an accurate quantitative result.

**7. For ordering or technical assistance contact:**

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